

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application.

COMPLETE LISTING OF THE CLAIMS:

Claims 1-50 : (Canceled)

Claim 51 : (New) A method of controlling a laser module in a wavelength division multiplexing application, the module including temperature control means for controlling a temperature of a laser and a variable attenuation attenuator connected to an output of the laser for controlling power of radiation output from the module, the method comprising the steps of, in the order given:

(a) before applying a laser current to operate the laser module, establishing a predetermined laser temperature using the temperature control means, and setting the attenuator to a maximum attenuation;

(b) applying the laser current having a value which produces a nominal desired wavelength, and controlling the laser current to give a wavelength of operation substantially equal to the desired wavelength; and

(c) reducing the maximum attenuation of the attenuator to a level to give a predetermined output power from the laser module.

Claim 52 : (New) The method according to claim 51, wherein the attenuation is reduced gradually during step (c).

Claim 53 : (New) The method according to claim 52, wherein reduction of the attenuation starts while the wavelength of operation is still converging towards its final value.

Claim 54 : (New) The method according to claim 52, wherein the attenuation is increased gradually during shutdown of the laser.

Claim 55 : (New) The method according to claim 52, wherein the attenuation is reduced in ramp fashion.

Claim 56 : (New) The method according to claim 51, wherein steps (a), (b) and (c) are performed using respective control loops.

Claim 57 : (New) The method according to claim 56, wherein the control loops have different time responses.

Claim 58 : (New) The method according to claim 57, wherein a power-setting loop of the control loops has the fastest response, and wherein a temperature-setting loop of the control loops has the slowest response.

Claim 59 : (New) The method according to claim 56, wherein the control loops are digital control loops.

Claim 60 : (New) The method according to claim 51, wherein step (b) utilizes two wavelength-monitoring means having maximum sensitivity at wavelengths respectively slightly greater than and less than a nominal wavelength of operation.

Claim 61 : (New) The method according to claim 60, wherein the wavelength of operation corresponds to a wavelength which gives rise to equal output signals from the two wavelength-monitoring means.

Claim 62 : (New) The method according to claim 52, wherein step (a) is performed only once when the laser module is initially powered up, the laser temperature being maintained constant while the laser module is in service.

Claim 63 : (New) The method according to claim 51, and setting the attenuation of the attenuator to the maximum attenuation prior to powering-down the laser.

Claim 64 : (New) The method as claimed in claim 63, wherein, during powering-up of the laser, following the setting of the attenuation to the maximum attenuation, a laser current is increased to a desired operating level and, when an operating wavelength of the laser has settled to a desired wavelength, or has come to within a given tolerance of the desired wavelength, the attenuation is reduced to a normal working level.

Claim 65 : (New) The method according to claim 64, wherein the attenuation is gradually reduced after the wavelength has settled to a final value.

Claim 66 : (New) The method according to claim 63, wherein, during powering-down of the laser, following the setting of the attenuation to the maximum attenuation, the laser current is reduced to a substantially zero level.